

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF PENNSYLVANIA

IN RE: NATIONAL FOOTBALL LEAGUE  
PLAYERS' CONCUSSION INJURY  
LITIGATION

No. 2:12-md-02323-AB  
MDL No. 2323

Kevin Turner and Shawn Wooden,  
*on behalf of themselves and  
others similarly situated,*

Plaintiffs,

v.

National Football League and  
NFL Properties, LLC,  
successor-in-interest to  
NFL Properties, Inc.,

Defendants.

THIS DOCUMENT RELATES TO:  
ALL ACTIONS

**DECLARATION OF Charles Bernick, MD, MPH**

Charles Bernick affirms under penalty of perjury the truth of the following facts:

1. I am Associate Director, Cleveland Clinic Lou Ruvo Center for Brain Health. My *curriculum vitae* is attached as Exhibit A.
2. I have been asked to submit this declaration in support of the objection to the proposed class action settlement in the above captioned case filed by the MoloLamken LLP law firm. I am not being compensated for my work in doing so.
3. Chronic traumatic encephalopathy (or CTE) is a unique neurodegenerative disease; it is not the same as ALS, Alzheimer's disease, or Parkinson's disease.
4. Repetitive brain trauma is a necessary condition for developing CTE.

5. ALS, Alzheimer's disease, and Parkinson's disease are found in the general population of individuals who have not suffered repetitive brain trauma. Suicidality does not present as a symptom of these diseases.

6. Mood and behavioral impairments such as depression, suicidality, hopelessness, impulsivity, explosiveness, rage, and aggression, although present in the general population, appear more frequently in individuals suffering from CTE than in the general population.

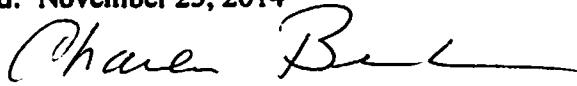
7. The mood and behavioral impairments associated with CTE can present prior to the onset of CTE-related dementia and can be the cause of significant disability and distress for the patient.

8. Based on my experience and knowledge of the clinical and scientific literature, I believe that a reliable, valid, and clinically accepted diagnosis of CTE, based, in part, on objective biomarkers, will likely be possible in the next decade, if not sooner, and long before the 65-year term of the proposed NFL Concussion Litigation Settlement expires.

9. I am not aware of the use of the diagnostic or classification categories of "Neurocognitive Impairment Level 1.0," "Neurocognitive Impairment Level 1.5," or "Neurocognitive Impairment Level 2.0" anywhere in the medical or scientific community.

Pursuant to 28 U.S.C. § 1746, I state under penalty of perjury that the foregoing is true and correct.

Dated: November 25, 2014



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Charles Bernick, MD, MPH

# Exhibit A

**CURRICULUM VITAE -August, 2014**

**CHARLES BERNICK, M.D**  
**8808 Cortile Dr.**  
**Las Vegas, NV 89134**

**Personal Data:**

**Born:** February 11, 1955  
Los Angeles, California

**Medical Licensure:** Nevada #6978

**Education:**

<b>BA</b>	Rice University, Department of History, Houston, Texas Honors: Phi Beta Kappa	1972-1976
<b>MD</b>	University of Texas Southwestern Medical School, Dallas, Texas Honors: Alpha Omega Alpha	1976-1980
	Mt. Zion Hospital San Francisco, California Internship, Internal Medicine	1980-1981
	University of Miami School of Medicine Miami, Florida Residency Neurology	1981-1984
	University of Arizona Health Science Center Tucson, Arizona Fellowship, Neurology and Neuromuscular Disorders	1984-1986
<b>MPH</b>	University of Nevada, Las Vegas Las Vegas, NV	2011

**Experience:**

Associate Medical Director, Cleveland Clinic Lou Ruvo Center for Brain Health	2009 - Present
Director, University of Nevada School of Medicine Alzheimer's Disease Diagnostic and Treatment Centers Las Vegas, Reno, and Elko, Nevada	1994-2009

Professor of Neurology 2002 - 2009  
University of Nevada School of Medicine  
Las Vegas, NV

Chief Division of Neurology 1994-2005  
University of Nevada School of Medicine  
Las Vegas, Nevada

Director, American Parkinson's Disease Association 1998-2011  
Information and Referral Center

Clinical Assistant Professor 1987-1993  
Alzheimer's Disease Diagnostic and Treatment Center  
U.C. Davis Medical Center, Sacramento, California

Staff Neurologist 1986-1993  
Medical Clinic of Sacramento  
Sacramento, CA

Medical Director 1992-1993  
Eskaton's Alzheimer's Disease Special Units  
Sacramento, California

Attending Neurologist 1986-1993  
Muscular Dystrophy Association Neuromuscular Clinic  
Sacramento, California

Instructor of Neurology 1985-1986  
University of Arizona College of Medicine  
Tucson, Arizona

Medical Director 1985-1986  
Alzheimer's Disease Special Care Unit  
Desert Life Health Care Center, Tucson, Arizona

**Board Certification:**

Diplomate American Board of Psychiatry and Neurology 1987  
American Board of Electrodiagnostic Medicine 1989

**Professional Activities:**

Member, State of Nevada Alzheimer's Disease Task Force 2012  
President, Nevada Lifespan Respite Coalition 2007 -2011  
Member, UNLV Gerontology Community Advisory Committee 2007 - 2009  
Member American Academy of Neurology 1981- Present  
Committee Member, Board of Directors, National Alzheimer's

Association	1999-2000
Member, Medical Advisory Committee, Desert Southwest Chapter,	
Alzheimer's Association	2006 - Present
Member, State of Nevada Alzheimer's Advisory Board	2000-2006
Member, Alzheimer's Association Public Policy Committee	2002- 2003
Board of Directors, Southern Nevada Alzheimer's Association	1994-2000
Reviewer, Alzheimer's Association Medical & Scientific Group	2000-Present
Member, Advisory Board, College of Sciences, UNLV	2000
Member, Advisory Board, Nevada Geriatric Education Center	1994-Present
Member, Geriatric Neurology Section, American Academy of Neurology	1993-Present
Member, Alzheimer's Disease Neurology Education Council	1997
Board of Directors, Jewish Family Services	1996-1997
Board of Directors, Visiting Nurses Association	1990-1992
Professional Advisory Committee, Multiple Sclerosis Society	1990-1993
Qualified-Medical Examiner, Industrial Medical Council,	1992-1993
State of California	

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Bernick C, Stern LZ: Neurologic Complaints in the Elderly. **Postgrad Med.** 77(8):124-138, 1985.

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Bernick C, Stern LZ: Spontaneous, Isolated, Mesencephalic Hemorrhage. **Neurology** 36:1627, 1986.

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Bernick C: Familial Hypokalemic Periodic Paralysis. **Nerve & Muscle** 11: 10921093, 1988.

Weilder P, Mungas D, Bernick C: Propanolol for the Control of Disruptive Behavior in Senile Dementia. **J Geriatric Psychiatry Neorol** 1: 226-230, 1988.

Mungas D, Cooper J, Weilder P, Bernick C: Dietary Preference for Sweet Foods in

Patients with Dementia. **JAGS** 38:999-1007, 1990.

Bernick C, Stern LZ: Muscle Cramps and Motor System and Gait. In Walker HK, Hall W, Hurst JW (eds) **Clinical Methods** Butterworths, Stoneham, MA, 1990, pp281-284, 351-355

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Longstreth W, Bernick C, Manolio T, et al. Lacunar Infarcts Defined by Magnetic Resonance Imaging, the Cardiovascular Health Study. **Arch Neurol** 1998; 55: 1217-1225

Longstreth W, Bernick C, Fitzpatrick A, Cushman M, Knepper L, Lima J, Furberg C. Frequency and Predictors of Stroke death in 5,888 Participants in the Cardiovascular Health Study. **Neurology** 2001; 56:368-375

Bernick C, Kuller L, Dulberg C, Longstreth W, et al. Silent MRI Infarcts and the Risk of Future Stroke: The Cardiovascular Health Study. **Neurology** 2001;57:1222-1229

Longstreth WT, Katz R, Olson J, Bernick C, Carr JJ, Manilow MR, Hess DL, Cushman M, Schwartz SM. Plasma total homocysteine levels and cranial magnetic resonance imaging findings in elderly persons: the Cardiovascular Health Study. **Arch Neurol**. 2004; 61:67-72

Kuller L, Longstreth WT, Arnold A, Bernick C, Bryan RN, Beauchamp N. White matter hyperintensity on cranial magnetic resonance imaging- a predictor of stroke. **Stroke** 2004; 35: 1821-1825

Longstreth W, Katz R, Olson J, Bernick C, Carr J, Malinow M, Hess D, Cushman M, Schwartz S. Plasma total homocysteine levels and cranial MRI findings in elderly persons: The Cardiovascular Health Study. **Arch Neurol** 2004; 61: 67-72

Bernick C, Katz R, Smith N, Rapp S, Bhadelia R, Carlson M, Kuller L. Statins and Cognitive Function in the Elderly: The Cardiovascular Health Study. **Neurology** 2005; 65: 1388-1394

Rea T, Breitner J, Psaty B, Fitzpatrick A, Lopez O, Newman A, Hazzard W, Zandi P, Burke G, Lyketsos C, Bernick C, Kuller L. Statins and the Risk of Incident Dementia: The Cardiovascular Health Study. **Archives of Neurol** 2005; 62:1047-51

Baker ML, Marino Larsen EK, Kuller LH, Klein R, Klein BE, Siscovick DS, Bernick C, Manolio TA, Wong TY. Retinal microvascular signs, cognitive function, and dementia in older persons, The Cardiovascular Health Study. **Stroke**. 2007; 38: 2041-7

Barzilay J, Fitzpatrick A, Luchsinger J, Yasar S, Bernick C, Jenny N, Kuller L. Albuminuria and dementia in the elderly: a community study. *Am J Kidney Dis* 2008; 52: 216-26

Longstreth WT, Arnold AM, Kuller LH, Bernick CB, Lefkowitz DS, Beauchamp NJ, Manolio TA. Progression of MRI defined brain vascular disease predicts vascular events in the elderly. *Stroke* 2011; 42

Raji CA, Lopez OL, Kuller LH, Carmichael OT, Longstreth WT, Gach M, Boardman J, Bernick C, Thompson PM, Becker JT. White matter lesions and brain gray matter volume in cognitively normal elders. *Neurobiology of Aging* 2012; 33: e7-e16

Bernick C, Cummings J, Ramen R, Sun Y, Aisen P. Age and rate of cognitive decline in Alzheimer's disease: Implications for clinical trials. *Arch Neurol* 2012; 69: 901-905

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Shin W., Mahmoud S., Sakaie K., Banks S.J., Lowe, M.J., Phillips M., Modic M.T., Bernick C. Diffusion measures indicate fight exposure-related damage to cerebral white matter in boxers and mixed martial arts fighters. *American Journal of Neuroradiology*, 2014 Feb;35(2):285-90.

Banks SJ, Obuchowski N, Shin W, Lowe M, Phillips M, Modic M, **Bernick C.** The protective effect of education on cognition in professional fighters. *Arch Clin Neuropsychol.* 2014 Feb;29(1):54-9

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#### **Abstracts:**

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Bernick C, Longstreth WT, Manolio TA, Jungreis CA, Price TR: Clinical Factors Associated with Lacunes on Cranial Magnetic Resonance Imaging of 3,660 Elderly People. ( Twenty-Second International Joint Conference on Stroke and Cerebral

Circulation By the American Heart Association, Anaheim, February, 1997.)

Heckbert SR, Longstreth WT, Psaty BM, Murros KE, Smith NL, Bernick C, Furberg CD: Association of Anti Hypertensive Agents with MRI White Matter Findings and Mini Mental State Score in Older Adults. (Fourth International Conference on Preventive Cardiology, Montreal, June, 1997.)

Bernick C, Saxena S. Use of Mirtazapine for Agitated Behaviors in Alzheimer's Disease ( American Neuropsychiatric Association, January, 1999, New Orleans)

Bernick C, Fitzpatrick A, Longstreth W, Cushman M, Furburg C. Death From Stroke ( American Academy of Neurology, April, 1999, Toronto)

Bernick C, Kranthi D, Norquiera A. Psychosis and Serotonergic Agents in Alzheimer's Disease (Southern Medical Association, Nov. 2000)

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Beauchamp N, Kuller L, Longstreth W, Arnold A, Bernick C, Bryan R. T2 Weighted White Matter Hyperintensity on Cerebral MRI - A Predictor of Stroke ( American Academy of Neurology, April 2002, Denver)

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Bernick C, Kelley K, Sholar M. Seizure like episodes in Alzheimer's Disease (Southern Medical Association, August, 2008, Nashville)

Bernick C, Simmons S, Sholar M. Use of the Luria 3 Step motor sequencing test as a measure of cognitive function in dementia screening. (American Academy of Neurology, April, 2011, Honolulu)

Bernick C, Lopez O, Chang Y, Becker J. Modifiers of trajectory to Alzheimer's disease (AAIC, July, 2011, Paris)

Bernick C, Banks S, Phillips M, Lowe M, Jones S, Shin W, Modic M. The threshold effect of repeated head trauma on brain structure and cognition: The Professional Fighters Brain Health Study (American Academy of Neurology, April, 2012, New Orleans)

Mayer, B., Banks, S., Bernick, C. Impulsiveness in professional fighters. (American Psychological Foundation, Chicago, IL, June 2012)

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Bernick C, Banks S., Obuchowski N, Shin W, Weights and Volumetric Measures: The Effect of Weight Class on Brain Volume in Professional Combatants (AAN, San Diego, April 2013)

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### **Pharmaceutical Studies**

Principal Investigator, A 16 week Open-Label Safety Study of Tacrine with Monitoring of ALT, 1994

Principal Investigator, 48 Week Efficacy and Safety Study of Propentofylline in Patients with Alzheimer's Disease, 1995

Principal Investigator, 26 Week Efficacy and Safety Study of Propentofylline in Vascular Dementia, 1995

Principal Investigator, 16 Week Dose Response Study of Tacrine GITS, 1996

Principal Investigator, 26 Week Dose Finding Study Investigating the Efficacy and Safety of Lu 25-109 in Patients With Alzheimer's Disease, 1997

Principal Investigator, Open Label Safety and Efficacy Study of Exelon in Patients with Alzheimer's Disease in the Community Setting, 1997

Principal Investigator, 12 Month Safety and Efficacy Trial of Idebenone in Patients with Alzheimer's Disease, 1997

Principal Investigator, 6 Month Safety and Efficacy Study of Mementane in Alzheimer's Disease, 1998

Principal Investigator, 7 Week Safety and Efficacy Study of Pre-gabalin in Chronic Low Back Pain, 1998

Principal Investigator, Safety and Efficacy Study of Vitamin E and Donepezil to Delay Clinical Progression from Mild Cognitive Impairment to Alzheimer's Disease, 1999

Principal Investigator, Melatonin for Sleep Disturbance in Alzheimer's Disease, 1999

Principal Investigator, A Multicenter Trial of Rofecoxib and Naproxen in Alzheimer's Disease, 1999

Principal Investigator, Safety and Efficacy Study of Pregabalin in Post Herpetic Neuralgia, 2000

Principal Investigator, Safety and Efficacy Study of Apomorphine in Parkinson's Disease, 2000

Principal Investigator, Tolerability and Effect of Entacapone in Parkinson's Subjects with End of Dose Wearing Off Symptoms, 2000

Principal Investigator, Donepezil in Severe Alzheimer's Disease, 2001

Principal Investigator, Safety and Efficacy Study of FK960 in Subjects with Mild to Moderate Alzheimer's Disease, 2001

Principal Investigator, Healthy Aging and Memory Study, 2002

Principal Investigator, Treatment of Agitation/Psychosis in Dementia/Parkinsonism, 2002

Principal Investigator, Reducing Homocysteine to Slow Cognitive Decline in Alzheimer's Disease, 2003

Principal Investigator, Dose Ranging, Safety and Efficacy Evaluation of NS 2330 in Mild to Moderate Alzheimer's Disease, 2003

Principal Investigator, Valproate to Attenuate the Progression of Alzheimer's Disease, 2004

Principal Investigator, Natural Huperzine A in Alzheimer's Disease, 2004

Principal Investigator, Evaluation of ONO 2506PO in Patients with Mild to Moderate Alzheimer's Disease, 2004

Principal Investigator, Safety and Efficacy of FK962 in Mild to Moderate Alzheimer's Disease, 2004

Principal Investigator, Efficacy and Safety of Donepezil in Subjects with Mild Cognitive Impairment, 2004

Principal Investigator, Donepezil in Hispanic Individuals, 2006

Principal Investigator, Alzheimer's Disease Neuroimaging Initiative, 2006

Principal Investigator, Efficacy and tolerability of E2007 as an adjunctive therapy in levodopa treated Parkinson's Disease patients with motor fluctuations, 2007

Principal Investigator, Efficacy and safety of Solvay in Parkinson's Disease patients, 2007

Principal Investigator, Home Based Assessments, 2008

Principal Investigator, Efficacy and Safety of ELND005 in mild to moderate Alzheimer's disease, 2008

Principal Investigator, Efficacy and Safety of Bapineuzumab in mild to moderate Alzheimer's Disease, 2008

Principal Investigator, Efficacy and Safety of T-817MA in mild to moderate Alzheimer's Disease, 2008

Principal Investigator, Efficacy and Safety of TTP488 in mild to moderate Alzheimer's Disease, 2008

Principal Investigator, Efficacy and Safety of IVIgG in mild to moderate Alzheimer's Disease, 2009

Principal Investigator, Efficacy and Safety of Dimebon in combination with donepezil in mild to moderate Alzheimer's Disease, 2009

Principal Investigator, Safety and pharmacodynamic and pharmacokinetic effects of BMS-708 163 in the treatment of patients with prodromal Alzheimer's disease, 2010

Principal Investigator, Efficacy and Safety of Preladenant in early Parkinson's disease, 2011

Principal Investigator, Amyloid Imaging PET and safety trial of ACC-001 in early Alzheimer's disease, 2011

Principal Investigator, Impact of Florbetapir F 18 PET on the clinical diagnosis and management of patients with progressive cognitive decline, 2011

Principal Investigator, Performance of Aclarus DxTM in US patients suffering from memory impairment, 2011

Principal Investigator, A Phase 2, Multicenter, 24-Month, Randomized, Third-Party Unblinded, Placebo-Controlled, Parallel-Group Amyloid Imaging Positron Emission Tomography (PET) And Safety Trial of ACC-001 and QS-21 Adjuvant in Subjects with Early Alzheimer's Disease, 2012

Principal Investigator, A Randomized, Double-Blind, Placebo-Controlled,

Parallel-Group, Multicenter, Phase II Study to Evaluate the Impact of MABT5102A on Brain Amyloid and Related Biomarkers in Patients With Mild to Moderate Alzheimer's Disease, 2012

Principal Investigator, Phase II Study to Evaluate The Impact on Biomarkers of Resveratrol Treatment in Patients with Mild to Moderate Alzheimer's Disease, 2012

Principal Investigator, Effects of NeuroAD system, Combined TMS Stimulation and Cognitive Training, on the Cognitive Function of Mild to Moderate Alzheimer Patients: A Single-Center Randomized, Double-Blind, Placebo Controlled Study, 2013

Principal Investigator, A 26-Week, Double-blind, Randomized, Placebo-controlled, Parallel-group Study to Investigate the Effects of Daily Administration of AC-1204 in Participants with Mild to Moderate Alzheimer's Disease (AD) 2013

### **Epidemiological Studies**

Principle Investigator, ADNI 2, 2011-Present

Principle Investigator, Professional Fighters Brain Health Study, 2011-Present